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REC'D 27 AUG 2004

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PCT

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Signed 

Dated 19 August 2004

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THE PATENT OFFICE

A

- 6 AUG 2003



06AUG03 E826041-7 201559  
P01/7700 0100-0318366.2

# Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road  
Newport  
South Wales  
NP10 8QQ

1. Your reference

MJ/CS/OML.64

2. Patent application number

(The Patent Office will fill in this part)

0318366.2

6 AUG 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Owen Mumford Limited  
Brook Hill  
Woodstock  
Oxfordshire OX20 1TU

Patents ADP number (if you know it)

4413738002

If the applicant is a corporate body, give the country/state of its incorporation

United Kingdom

4. Title of the invention

Improvements Relating to Blood  
Sampling Devices

5. Name of your agent (if you have one)

Wynne-Jones, Laine & James

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

22 Rodney Road  
Cheltenham  
Gloucestershire GL50 1JJ

Patents ADP number (if you know it)

1792001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)

Date of filing  
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body.

See note (d))

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**Patents Form 1/77**

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document

Continuation sheets of this form

Description 3

Claim(s) -

Abstract -

Drawing(s) 2 + 2

CF

10. If you are also filing any of the following, state how many against each item.

Priority documents -

Translations of priority documents -

Statement of inventorship and right to grant of a patent (Patents Form 7/77) -

Request for preliminary examination and search (Patents Form 9/77) -

Request for substantive examination (Patents Form 10/77) -

Any other documents (please specify) -

11:

I/We request the grant of a patent on the basis of this application.

Signature

Date

Wynne-Jones, Laine & James 5.8.2003

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr M James 01242 515807

**Warning**

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

**Notes**

- a) If you need help to fill in this form or you have any questions, please contact the Patent Office on 08459 500505.
- b) Write your answers in capital letters using black ink or you may type them.
- c) If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.
- d) If you have answered 'Yes' Patents Form 7/77 will need to be filed.
- e) Once you have filled in the form you must remember to sign and date it.
- f) For details of the fee and ways to pay please contact the Patent Office.

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## Improvements Relating to Blood Sampling Devices

A conventional form of blood sampling device comprises a lancet which is sprung loaded within a housing so that, upon release of a trigger, the lancet is driven forward to cause a needle tip to project momentarily from an end of a housing to prick the skin of a patient in order to enable a blood sample to be taken. For transportation before use, the needle is covered by a removable cap and the lancet is held within the housing in the sprung loaded condition. There is, however, always the possibility of inadvertent release of the trigger. It is an object of this invention to provide a blood sampling device of this nature which provides greater security against release of the lancet from the housing during transportation before use.

Accordingly, there is provided a blood sampling device comprising a needle-carrying lancet located within a housing and having a cap positioned over the needle, the cap extending to project through an opening at one end of the housing and having locating flanges fitting into grooves in two opposed sides of the outer walls of the housing, the cap being twistable to release the flanges from the grooves such that the cap can be detached from the housing and from the needle.

A cap holds the lancet securely within the housing during transportation, even if pressure is inadvertently applied to the trigger which would otherwise release the drive mechanism to cause the spring to drive the lancet out of the housing. Before use, the user will rotate the cap relative to the rest of the lancet to enable the cap to be detached and removed from the tip of the needle. This rotation will also release the flanges from the grooves, thus enabling the cap to

be detached from the device whilst leaving the lancet in its primed state.

In the preferred arrangement, the lancet is sprung loaded to urge the lancet in the direction towards the opening in the housing.

5 Ideally the device will include a trigger-releasable latch to hold the lancet within the housing such that an exposed needle will not project through said opening until the latch is released by the trigger.

The invention may be performed in various ways and a preferred example thereof will now be described, with reference to the accompanying diagrammatic drawings, in which:

10 Figures 1 and 2 are plan and side views respectively of a blood sampling device of this invention;

Figure 3 is a partial cross-section through the device of Figures 1 and 2; and

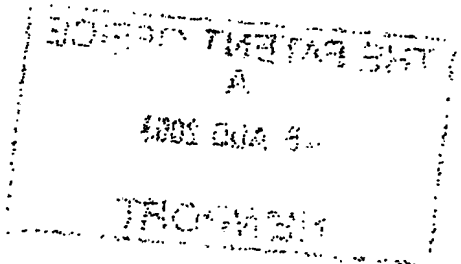
15 Figures 4 to 6 show, in cross-section, the device of Figures 1 and 2 in varying stages of use.

The device shown in Figures 1 to 3 comprise a housing 1 retaining a lancet body 2. As can be seen particularly from Figure 3, the lancet body encloses a needle 3 whose tip 4 is covered by a cap 5. The other end of the cap has a head 6 provided with flanges 7. These flanges locate within notches 8 at  
20 the end of the housing 1. As can be seen from Figure 4, the flanges 7 and notches 8 are provided only on two sides of the housing 1. The view of Figure 1 is onto one of those two sides.

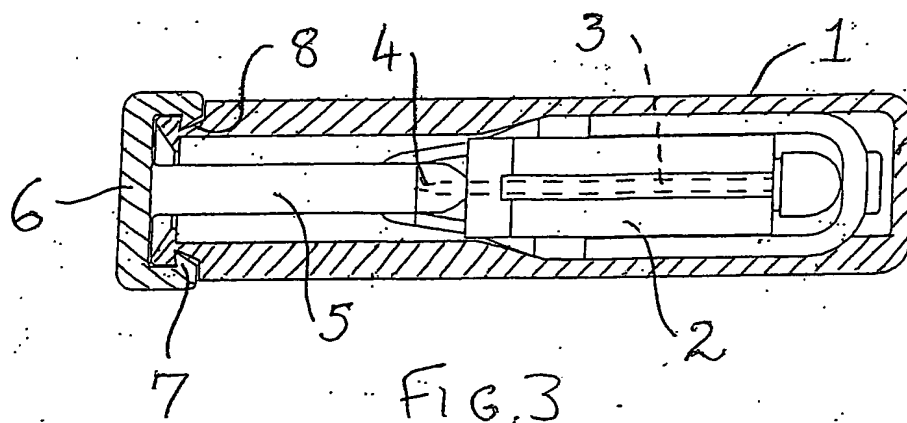
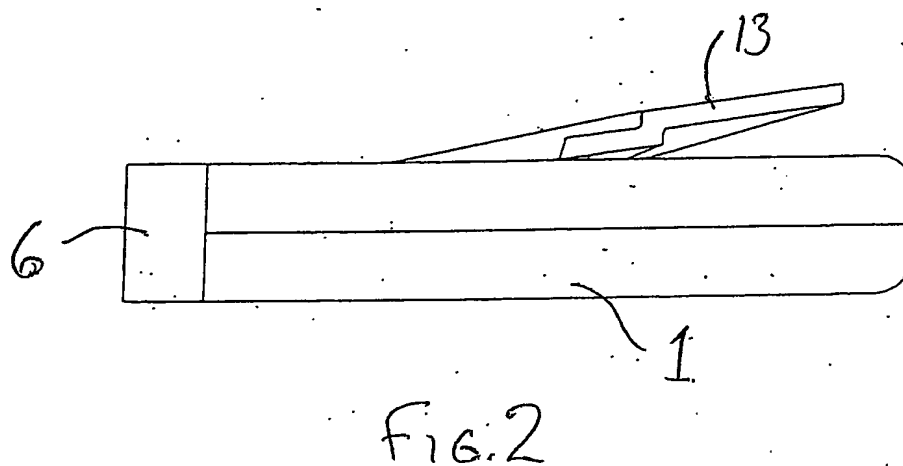
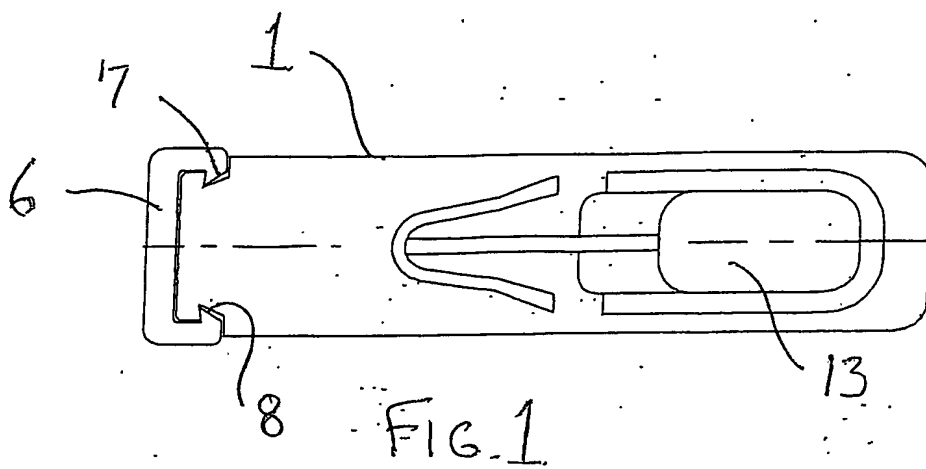
The location of the flanges 7 within the notches 8 holds the lancet 2 within the body 1 so as to compress a spring (not shown) positioned between a head 9  
25 and a slotted portion 10 of the housing 1. When the device is to be used, the head 6 of the cap 5 is rotated through 90° so as to release the flanges 7 from the notches 8 in the two sides of the housing 1. This allows the lancet body 2 to

move forwards (under the bias of the spring) until a ledge 11 on the lancet locates against a flange 12 on the trigger member 13. Twisting of the cap 5 also releases the cap from the rest of the lancet body 2 at the weakened area 14. The cap can then be removed to expose the tip 4 of the needle within the housing 1, as shown in Figure 6. The blood sampling device can now be actuated by pressing the trigger 13 so that the flange 12 is released from the ledge 11. This causes the lancet to be driven forwards by the spring so that the tip 4 of the needle projects momentarily through the opening at the end of the housing 1.

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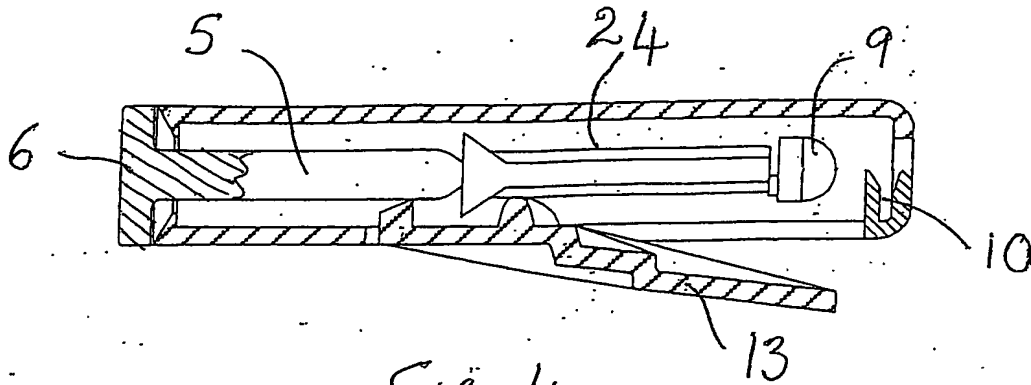


FIG. 4

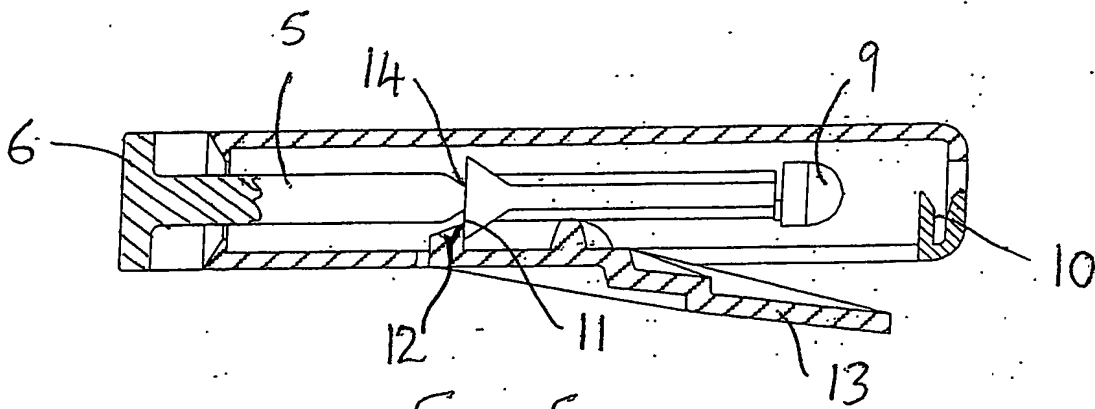


FIG. 5

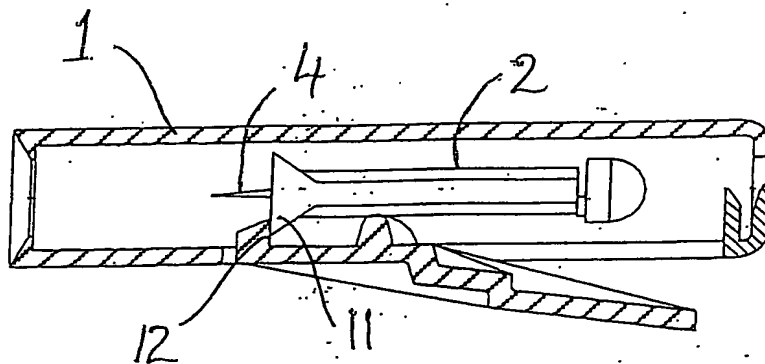


FIG. 6